

**UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF MICHIGAN  
SOUTHERN DIVISION**

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AUTOMOTIVE TECHNOLOGIES  
INTERNATIONAL, INC.,

Plaintiff/Counter-Defendant,

v.

Case No. 08-11048

DELPHI CORPORATION, et al.,

Defendants/Counter-Plaintiffs.

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**OPINION AND ORDER GRANTING FOUR OF DEFENDANTS' MOTIONS FOR  
SUMMARY JUDGMENT AND TERMINATING AS MOOT TWO OF  
DEFENDANTS' MOTIONS**

Before the court are six motions for summary judgment relating to four issued patents, assigned to Plaintiff, describing various automotive technologies: U.S. Patent Nos. 6,833,516 ("516 Patent"), 7,243,945 ("945 Patent"), 7,407,029 ("029 Patent"), and 6,484,080 ("080 Patent"). The motions have been fully briefed, and the court heard oral argument on January 6, 2011. For the following reasons, the court will grant four of Defendants' motions and terminate the remaining two as moot.

**I. BACKGROUND**

This action began when now-Defendants/Counter-Plaintiffs ("Defendants")<sup>1</sup> filed suit against Plaintiff/Counter-Defendant ("Plaintiff") seeking a declaratory judgment of the invalidity of certain patents. Counterclaims were filed, the pleadings were amended,

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<sup>1</sup> As used in this order, "Defendants" refers generically to those Defendants who have moved for summary judgment on a motion. This utilization is adopted for simplicity, as not all Defendants have moved for summary judgment, and not all Defendants who have so moved—DPH Holding Corporation, Delphi Automotive Systems, L.L.C., and Nissan North America, Inc.—have joined in each motion.

and the parties were realigned by the court. Defendant Delphi manufactures and distributes a Passive Occupant Detection System (“PODS”) product, the purpose of which is to regulate airbag deployment under certain circumstances. The other Defendants in this action are Original Equipment Manufacturers (“OEMs”) who purchased and implemented the PODS device in the vehicles they manufacture and sell. Plaintiff alleges that the production and use of the PODS device without its consent infringes the four patents-in-suit, and seeks damages. Defendants ask the court for a declaratory judgment that the patents are invalid as anticipated.

The court held a *Markman* hearing and subsequently construed the claims on September 11, 2009. Two additional amended complaints followed, with Plaintiff settling on litigating the four above-named patents-in-suit. The case was consolidated with Case No. 10-10647. Defendants filed their six summary judgment motions in early July 2010, and the court issued an amended scheduling order on July 20, 2010, setting a briefing schedule for responses and replies to the summary judgment motions.

## **II. STANDARD**

Under Federal Rule of Civil Procedure 56, summary judgment is proper when “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). “In deciding a motion for summary judgment, the court must view the evidence in the light most favorable to the non-moving party, drawing all reasonable inferences in that party’s favor.” *Sagan v. United States*, 342 F.3d 493, 497 (6th Cir. 2003). “Where the moving party has carried its burden of showing that the pleadings, depositions, answers to interrogatories, admissions and affidavits in the record, construed favorably to the nonmoving party, do

not raise a genuine issue of material fact for trial, entry of summary judgment is appropriate.”<sup>2</sup> *Gutierrez v. Lynch*, 826 F.2d 1534, 1536 (6th Cir. 1987) (citing *Celotex Corp. v. Catrett*, 477 U.S. 317 (1986)).

The court does not weigh the evidence to determine the truth of the matter, but rather, to determine if the evidence produced creates a genuine issue for trial. *Sagan*, 342 F.3d at 497 (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986)). The moving party must first show the absence of a genuine issue of material fact. *Plant v. Morton Int’l, Inc.*, 212 F.3d 929, 934 (6th Cir. 2000) (citing *Celotex*, 477 U.S. at 323). The burden then shifts to the nonmoving party, who “must do more than simply show that there is some metaphysical doubt as to the material facts.” *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986). The non-movant must put forth enough evidence to show that there exists a genuine issue to be decided at trial. *Plant*, 212 F.3d at 934 (citing *Anderson*, 477 U.S. at 256).

The existence of a factual dispute alone does not, however, defeat a properly supported motion for summary judgment—the disputed factual issue must be material. See *Anderson*, 477 U.S. at 252 (“The judge’s inquiry, therefore, unavoidably asks whether reasonable jurors could find by a preponderance of the evidence that the plaintiff is entitled to a verdict—‘whether there is [evidence] upon which a jury can properly proceed to find a verdict for the party producing it, upon whom the *onus* of proof is imposed.’” (alteration and emphasis in original) (quoting *Schuylkill and Dauphin*

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<sup>2</sup> Rule 56 was amended effective December 1, 2010. Among other changes, the Rule modified the standard from one of “genuine issue as to any material fact” to one of “genuine dispute as to any material fact.” This distinction appears to be stylistic rather than substantive, and accordingly the Sixth Circuit’s precedent under the old formulation remains binding.

*Improvement Co. v. Munson*, 81 U.S. 442, 448 (1871))). A fact is “material” for purposes of the summary judgment inquiry when proof of that fact would establish or refute an essential element of the claim or a defense advanced by either party. *Kendall v. Hoover Co.*, 751 F.2d 171, 174 (6th Cir. 1984).

A patent is presumed valid under 35 U.S.C. § 282. “Consequently, ‘a moving party seeking to invalidate a patent at summary judgment must submit such clear and convincing evidence of invalidity so that no reasonable jury could find otherwise.’” *Chrimar Sys., Inc. v. Cisco Sys., Inc.*, 318 F. Supp. 2d 476, 491 (E.D. Mich. 2004) (quoting *Eli Lilly & Co. v. Barr Labs.*, 251 F.3d 955, 962 (Fed. Cir. 2001)); see also *Beckson Marine, Inc. v. NFM, Inc.*, 292 F.3d 718, 725 (Fed. Cir. 2002) (holding that a party seeking to establish particular claims as invalid must overcome the presumption of validity in 35 U.S.C. § 282 by clear and convincing evidence).<sup>3</sup> However, “[t]he burden of persuasion created by the presumption of validity of the patent as issued is more easily met when evidence is introduced of more pertinent prior art than that considered by the Patent Examiner during prosecution of the patent application.” *Standard Mfg.*

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<sup>3</sup> The Supreme Court recently granted a petition for writ of certiorari which presents the question of whether the “clear and convincing” standard is properly applied in determining invalidity as a result of the § 282 presumption. *Id. Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831 (Fed. Cir. 2010), *cert. granted*, 79 U.S.L.W. 3128 (U.S. Nov. 29, 2010) (No. 10-290); see Petition for Writ of Certiorari, *Id.*, 2010 WL 3413088 (No. 10-290) (presenting the question of “[w]hether the court of appeals erred in holding that [the alleged infringer’s] invalidity defense must be proved by clear and convincing evidence.”). The petitioner in that case argues for a preponderance burden of proof where the examiner did not consider the prior art during prosecution. Petition for Writ of Certiorari, *Id.*, 2010 WL 3413088, at \*8 (No. 10-290). Because the court here will grant the motions for summary judgment under the more stringent clear and convincing standard, the outcome of *Id.* is not expected to impact the court’s analysis in this case.

*Co. v. United States*, 25 Cl. Ct. 1, 50 (Cl. Ct. 1991) (citing *Solder Removal Co. v. United States Int'l Trade Comm'n*, 582 F.2d 628, 633 (C.C.P.A. 1978)).

Finally, “[a] quite different burden is that of going forward with evidence—sometimes referred to as the burden of production—a shifting burden the allocation of which depends on where in the process of trial the issue arises.” *Tech. Licensing Corp. v. Videotek Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008). First the party alleging invalidity has the burden of going forward with evidence of anticipating prior art, and then the patent-holder has the burden of going forward with evidence

that it is not prior art because the asserted claim is entitled to the benefit of a filing date prior to the alleged prior art. This requires [a party] to show not only the existence of the earlier application, but why the written description in the earlier application supports the claim.

*Id.* (citation omitted). This “means producing sufficient evidence and argument to show that an ancestor to the [patent at issue], with a filing date prior to the [alleged prior art] date, contains a written description that supports all the limitations of . . . the claim being asserted.” *Id.* “Under 35 U.S.C. § 102 a claim is anticipated if each and every limitation is found either expressly or inherently in a single prior art reference.” *King Pharms., Inc. v. Eon Labs, Inc.*, 6126 F.3d 1267, 1274 (Fed. Cir. 2010) (internal quotation marks omitted).

In order to establish invalidity on obviousness grounds, Defendants must show that “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” See 35 U.S.C. § 103(a).

Obviousness under 35 U.S.C. § 103(a) is ultimately a legal question, based on underlying factual determinations. See *Richardson-Vicks, Inc. v. Upjohn Co.*, 122 F.3d 1476, 1479 (Fed. Cir. 1997). The factual determinations underpinning the legal conclusion of obviousness include 1) the scope and content of the prior art, 2) the level of ordinary skill in the art, 3) the differences between the claimed invention and the prior art, and 4) evidence of secondary factors, also known as objective indicia of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

*Eisai Co. v. Dr. Reddy's Labs., Ltd.*, 533 F.3d 1353, 1356 (Fed. Cir. 2008); see also *Para-Ordnance Mfg., Inc. v. SGS Imps. Int'l, Inc.*, 73 F.3d 1085, 1088 (Fed. Cir. 1995) ("The ultimate determination of obviousness is a question of law, which we review de novo."). "The scope and content of the prior art, differences between the prior art and the claimed invention, the level of ordinary skill in the art, and objective evidence of secondary considerations of patentability are fact determinations." *Para-Ordnance*, 73 F.3d at 1088. Additionally, "[w]hat the prior art teaches and whether it teaches toward or away from the claimed invention also is a determination of fact." *Id.* It is the movant's burden to prove invalidity by clear and convincing evidence. *Eisai*, 533 at 1356 (citing *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 881 (Fed. Cir. 1998)). As "[t]he Supreme Court stated in *Anderson*, . . . 'in ruling on a motion for summary judgment, the judge must view the evidence presented through the prism of the substantive evidentiary burden.'" *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 424 F.3d 1276, 1284 (Fed. Cir. 2005) (quoting *Anderson*, 477 U.S. at 254).

"The grant of summary judgment of invalidity for obviousness must be done on a claim by claim basis." *Knoll Pharm. Co. v. Teva Pharms. USA, Inc.*, 367 F.3d 1381, 1384 (Fed. Cir. 2004) (citing *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1371 (Fed. Cir. 2003)). "The accused infringer must prove by clear and

convincing evidence that each claim that is challenged cannot reasonably be held to be non-obvious.” *Id.* (citing *Monarch Knitting Mach. Corp.*, 139 F.3d at 881). Clear and convincing evidence exists when the movant “place[s] in the ultimate factfinder an abiding conviction that the truth of its factual contentions are ‘highly probable.’” *Colorado v. New Mexico*, 467 U.S. 310, 316 (1994).

The Supreme Court clarified the law of obviousness in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). In *KSR*, the Supreme Court rejected a rigid application of the “teaching, suggestion, or motivation” (“TSM”) test. *KSR*, 550 U.S. at 418-19. The Court explained: “The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.” *Id.* at 419. The Federal Circuit has since elaborated:

[A] rigid requirement of reliance on written prior art or patent references would, as the Supreme Court noted, unduly confine the use of the knowledge and creativity within the grasp of an ordinarily skilled artisan. [*KSR*, 127 S. Ct.] at 1742.

As this court has explained, however, a flexible TSM test remains the primary guarantor against a non-statutory hindsight analysis such as occurred in this case. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (“[A]s the Supreme Court suggests, a flexible approach to the TSM test prevents hindsight and focuses on evidence before the time of invention.”). The TSM test, flexibly applied, merely assures that the obviousness test proceeds on the basis of evidence—teachings, suggestions (a tellingly broad term), or motivations (an equally broad term)—that arise before the time of invention as the statute requires. As *KSR* requires, those teachings, suggestions, or motivations need not always be written references but may be found within the knowledge and creativity of ordinarily skilled artisans.

*Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364-65 (Fed. Cir. 2008).

### **III. DISCUSSION**

Defendants have submitted six separate motions for summary judgment regarding the four patents-in-suit. Two patents are the objects of two motions each, and the two remaining patents have a single motion attacking their respective claims.<sup>4</sup> Defendants have moved for summary judgment on the basis of anticipation of the '516, '029, '945, and '080 Patents, and on the basis of obviousness of the '945 Patent. They have also moved for summary judgment on two claims of the '080 Patent on the basis of collateral estoppel.

#### **A. '516 Patent**

The court finds the '516 Patent invalid as anticipated by U.S. Patent No. 5,232,243 ("Blackburn '243"), as there is no genuine dispute as to any material fact. Therefore, it need not consider the parties' arguments over DE 38 02 159 ("Roland '159"). Blackburn '243 issued on August 3, 1993, and therefore constitutes § 102(b) art to the '516 Patent, which the parties agree, for the purpose of this motion only, claims a priority date of June 7, 1995.

Plaintiff has agreed to litigate representative claims 14, 15, and 18 of the '516 Patent.<sup>5</sup> Defendants argue that Blackburn '243 teaches each and every limitation of those three claims. Plaintiff responds to these arguments, largely through the declaration of Dr. Hal Watson, Jr. ("Watson Declaration"), supplemented by references to the deposition of Dr. David S. Breed ("Breed Deposition").

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<sup>4</sup> Because the court resolves each patent on the basis of a single motion, this discussion is organized by patent rather than by motion.

<sup>5</sup> The court held representative claim 19 invalid as indefinite under 35 U.S.C. § 112. (Dkt. # 41 at 39.)



Plaintiff relies heavily on the Watson Declaration throughout its responses to the motions for summary judgment now pending before the court. While an expert's declaration may be of use to a court in deciding whether there is a genuine dispute of material fact, such a declaration is not necessarily capable of creating a genuine dispute and thereby defeating a motion for summary judgment on its own. "Broad conclusory statements offered by . . . experts are not evidence and are not sufficient to establish a genuine issue of material fact." *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1329 (Fed. Cir. 2001) (citing *Arthur A. Collins, Inc. v. N. Telecom, Ltd.*, 216 F.3d 1042, 1046 (Fed. Cir. 2000)); accord *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 1001 (Fed. Cir. 2008) ("Conclusory expert assertions cannot raise triable issues of material fact on summary judgment."); see *KSR*, 550 U.S. at 425-26 (finding expert declaration insufficient to create a dispute over obviousness of challenged patent in reversing Federal Circuit's vacation of grant of summary judgment by the district court). Thus, in evaluating the motions for summary judgment, the court looks to whether the underlying facts are in genuine dispute, not to whether Plaintiff's expert's reading of the prior art creates a dispute.

### 1. Claim 14

Claim 14 provides:

A method for controlling a deployable component in a vehicle, comprising the steps of: measuring at least one morphological characteristic of an occupant; obtaining a current position of at least a part of a seat on which the occupant is situated; and controlling the component based on the at least one measured morphological characteristic of the occupant and the current position of the seat, the step of controlling the component comprising the step of suppressing deployment of the component based on the at least one measured morphological characteristic of the occupant and the current position of the seat.

In its *Markman* order, the court construed “obtaining a current position of at least a part of a seat on which the occupant is situated” as “detecting the current position of at least a part of the seat on which the occupant is situated with respect to a reference position.

In other words, detecting how far forward or backward the seat is.” (Dkt. # 41 at 35.)

The parties have agreed to construe: “measuring at least one morphological characteristic of an occupant” as “measuring any measurable property of an occupant such as height, weight, leg or arm length, or head diameter”; “controlling” as having its ordinary meaning; and “suppressing deployment of the component based on the at least one measured morphological characteristic of the occupant and the current position of the seat” as “suppressing deployment of the component in a manner that is determined by at least the following: (1) the at least one measured morphological characteristic of the occupant; and (2) the current position of the seat.” (Dkt. # 92 Ex. 8 at 30.)

The court will address only those elements of the claim in dispute.

*a. “measuring any measurable property of an occupant such as height, weight, leg or arm length, or head diameter”*

Defendants argue Blackburn ‘243’s teaching of “an ‘occupant position and weight sensor 260’ that detects ‘the weight’ of an object in a vehicle seat” anticipates the parties’ agreed upon construction. See Blackburn ‘243 at 9:47-49. Plaintiff has two arguments in response: 1) the reference “does not disclose how the weight sensor is operating, but merely discloses a sensor” that detects weight, and therefore is non-enabling; and 2) the reference “fails to inherently disclose the measurement of a morphological characteristic.” (Dkt. # 125 ¶ 10; see Dkt. # 118 at 11-12.)

Plaintiff’s enablement argument is unavailing, because Blackburn ‘243 clearly teaches this measurement element. The ‘516 limitation does not require measuring

weight in a certain manner, nor does it require a precise method of calculation. It simply requires “measuring any measurable property,” which Blackburn ‘243 teaches, and this simple concept does not require great levels of detail to enable one of ordinary skill in the art to understand how to make and use the claimed invention. Such a person would understand how to measure weight. Similarly, Plaintiff’s inherent disclosure argument is unpersuasive. A “simple switch concept,” (Dkt. # 125 ¶ 10), is capable of “measuring any measurable property,” which is all that is required by the parties’ agreed upon construction. Plaintiff does not dispute that Blackburn ‘243 discloses a weight sensor, only that it “does not require the measurement of a morphological characteristic as required by this element.” (*Id.*) As the agreed upon construction does not require any sophisticated form of measurement, but simply measurement of a characteristic “such as . . . weight,” Blackburn ‘243 anticipates this element, because it teaches a weight sensor to measure weight.

*b. “suppressing deployment of the component in a manner that is determined by at least the following: (1) the at least one measured morphological characteristic of the occupant; and (2) the current position of the seat”*

Defendants next argue that this suppressing element is taught by Blackburn ‘243’s disclosure “that ‘[t]he deployment of the airbag is controlled in response to the weight and position of the occupant” and

that a “controller 250 monitors . . . the seat position sensor 272, the incline of the seat back from the sensor 270, and . . . the output signals from sensors 260 [the occupant position and weight sensor] and 266. A determination is made as to whether the occupant is at a location relative to the airbag assembly for which the airbag would not provide effective protection in a crash condition. If it is determined that an occupant is sitting at this ineffective protection location, the airbag is not deployed upon a vehicle crash condition.”

(Dkt. # 92 Ex. 10 at 2 (alteration in original) (quoting Blackburn '243 at 12:18-30).)

Plaintiff contends that “the reference teaches suppression of deployment based only on the presence or absence of an occupant and whether the occupant is animate or inanimate” and if that analysis results in deployment, “only then does the reference disclose using weight and seat position to determine the manner in which the airbag is to be employed.” (Dkt. # 118 at 12 (emphasis removed).)

Plaintiff’s analysis is unconvincing. The element requires suppression based on at least a morphological characteristic—in this case weight—and the seat position. Plaintiff in essence contends that since the reference has a two-step process for this suppression decision, it does not teach the element, even though Plaintiff concedes that “weight and seat position” are used “to determine the manner in which the airbag is to be employed” once the deployment decision is made. (*Id.*) But the element in claim 14 does not restrict itself to a one-step process for deployment and suppression decisions. Because Blackburn '243 teaches suppressing the airbag based on seat position and weight, this element, too, is anticipated by the reference.

There is no genuine issue of material fact that Blackburn '243 teaches each and every element of claim 14. Defendants have shown by clear and convincing evidence that the claim is invalid as anticipated.

## *2. Claim 15*

Plaintiff disputes Defendants’ argument that claim 15 is anticipated only insofar as it depends on claim 14. Accordingly, for the reasons stated above, claim 15 is also invalid as anticipated.

## *3. Claim 18*

Defendants argue that Blackburn '243 anticipates this dependent claim because it teaches a weight sensor, as is discussed above. Plaintiff responds that the reference makes no such disclosure for the same reasons described above in connection with claim 14. Because Blackburn '243 does indeed disclose a weight sensor that measures the weight of the occupant, it teaches each and every element of the claim, which is thereby rendered invalid as anticipated.

Blackburn '243 anticipates representative claims 14, 15, and 18. Accordingly, Defendants are entitled to summary judgment. The court will grant Defendants' "Motion for Summary Judgment of Invalidity of the '516 Patent."

#### **B. '945 Patent**

The court will grant Defendants' motion for summary judgment of invalidity on the basis that the '945 Patent is invalid as obvious under 35 U.S.C. § 103, and therefore need not consider Defendants' motion for summary judgment on the basis of anticipation. Similarly, as the court finds the litigated claims of the '945 Patent obvious in view of the prior art, it declines to address the parties' arguments regarding whether Plaintiff is estopped from defending the '945 Patent as non-obvious due to the prosecution history of the patent.

The parties agree that "one of ordinary skill in the art to which the '945 patent pertains would be an automotive engineer having at least an undergraduate degree in mechanical, electrical, or computer engineering, and at least a few years of experience working with automobile safety systems or sensors designed for use with automobiles." (Dkt. # 106 at 17 n.10.) The court will therefore adopt this meaning in conducting the obviousness analysis.

Defendants' contention, in essence, is that the prior art taught two general categories of invention at the time Plaintiff filed the application that would become the '945 Patent: a pressure sensor that signals a module that controls airbag deployment, and a bladder-based sensor capable of sending a signal to adjust components of a vehicle based on seat occupancy. They argue that the '945 Patent's claims are drawn toward simply substituting the bladder-based sensor, which was known to regulate vehicle components, for the pressure sensor, which was known to send signals to regulate an airbag. In other words, Defendants argue that the prior art taught a class of sensors that could regulate a specific component, and a specific sensor that could regulate a class of components. Plaintiff's patent, they say, merely selects the specific sensor (bladder-based) and the specific component (occupant restraint device, and in particular, an airbag).

Plaintiff says that the combination of the bladder and the airbag was not obvious, and Plaintiff reminds the court that it may not rely on the benefit of hindsight when judging the obviousness of an invention. Gutenberg's printing press, Galileo's telescope, and Goddard's rocket may seem ordinary and obvious today, but at the time of invention these achievements were anything but. So too, Plaintiff says, is the case with bladder-based sensors regulating airbags. It was not obvious to swap a bladder-based weight sensor for a simple pressure sensor, and there was nothing in the art at the time that suggested doing so. Plaintiff adds, *inter alia*, that: Defendants cannot, as a matter of law, meet a heightened burden of proof where the United States Patent and Trademark Office ("PTO") considered the prior art advanced as anticipatory; the Command 2000 System is not prior art; and looking to "secondary considerations of

non-obviousness,” the alleged infringing device was a “wild success,” the ‘945 Patent’s invention solved a “long-felt but unresolved need,” others could not solve the problem, and the invention “exhibited unexpected results.” (Dkt. # 123 at 7-9, 24-30.)

The court is mindful that resolution of each *Graham* prong requires a factual determination, but finds there is no genuine dispute of material fact as to any of the prongs.

### *1. Scope and Content of the Prior Art*

In the obviousness inquiry, after bestowing some general characteristics upon the putative person having ordinary skill in the art, the court must determine the scope of the prior art. With the exception of the COMMAND 2000 System, the parties agree that the references cited by Defendants constitute prior art. The art, as noted, falls into two categories, which provide a useful framework for the discussion of the art’s scope.

#### *a. Sensor-regulated airbags*

Defendants assert four prior art references as disclosing pressure sensor-regulated airbags: U.S. Patent Nos. 5,071,160 (“White ‘160”), 5,074,583 (“Fujita ‘583”), 5,413,378 (“Steffens ‘378”), and 5,670,853 (“Bauer ‘853”).

White ‘160 teaches regulating a restraint device, such as an airbag, using a system that includes a control module and “a pressure transducer” located in the vehicle occupant’s seat. The pressure sensor and other sensors send a signal to a module that in turn controls airbag deployment. White ‘160 at 4:26-6:10. Fujita ‘583 similarly discloses pressure sensors in the vehicle seat cushion that are connected to a control unit that regulates an airbag. Fujita ‘583 at 6:29-32, 8:66-9:11. Steffens ‘378 describes a weight sensor, which is linked to a controller that controls an occupant restraint

device, such as an airbag. Steffens '378 at 3:29-34, 8:32-40. Bauer '853, finally, also teaches weight sensors that, through an intermediate controller, regulate the airbag and other components. Bauer '853 at Abstract, 3:28-33, 3:55-58. Importantly, Bauer '853 suggests that position and weight sensors are interchangeable: "Controller **36** is operatively connected to position and weight sensor **52**. The position and weight sensor **52** *is preferably* an NxM array of individual position and weight sensors as shown and described in U.S. Pat. No. 5,232,243." Bauer '853 at 57-60 (boldface emphasis in original, italicized emphasis added).

*b. Bladder-based sensors*

Defendants also cite to a body of art that discloses bladder-based sensors used to control vehicle components. Defendants cite EP 0 152 092 ("Lobe '092"), JP 3-32943 ("Takagi '943"), and U.S. Patent No. 5,176,424 ("Tobita '424"). Defendants further argue that Delphi's COMMAND 2000 System discloses a bladder-based pressure sensor. Because the court finds that the published references are sufficient, when combined with the sensor-regulated airbag references discussed above, to render the '945 Patent invalid as obvious, it will not reach the parties' arguments regarding the COMMAND 2000 System.

Lobe '092 teaches a bladder-based pressure sensor in the seat of a vehicle. Lobe '092 at 2. Takagi '943 discloses a bladder-based sensor, located in the seat cushion, that signals a processor to adjust the height of the seat and of the headrest. Takagi '943 Translation at 3-4. Tobita '424 describes the use of a bladder lodged in a seat cushion to sense pressure and signal a control unit, which in turn adjusts the amount of fluid in the bladder to affect the firmness of the seat. Tobita '424 at 6:11-63.



Thus, the court concludes that the prior art teaches both various sensors regulating airbags, and bladder-based sensors regulating various components.

## *2. Difference Between Claimed Invention and Prior Art*

The '945 Patent's claims, as construed in the court's *Markman* order and by agreement of the parties, provide:

1. An apparatus for sensing pressure applied to a seat by an occupant of the seat and for controlling deployment of an airbag, comprising: a bladder defining a chamber,<sup>6</sup> said bladder being adapted to be arranged in a seat portion of the seat; a control module that issues a command or commands to control whether to deploy or suppress the airbag and/or how to adjust the manner in which the airbag is deployed; and a pressure sensor for measuring a pressure in said chamber, said pressure sensor generates a signal based upon the measured pressure in the chamber and provides that signal to the control module.
2. A method for controlling an occupant restraint device arranged to protect an occupant in a vehicle in a crash involving the vehicle, comprising the steps of: arranging a bladder defining a chamber in a seat portion of a seat in the vehicle; measuring a pressure in the chamber; providing a signal based upon the measured pressure in the chamber to a control module; and using a control module to issue a command or commands to control whether to deploy or suppress the occupant restraint device and/or how to adjust the manner in which the occupant restraint device is deployed.
3. The method of claim 2, wherein the occupant restraint device is an airbag.
4. A vehicle including a system for protecting art [sic – an] occupant in the vehicle in a crash involving the vehicle, comprising: an occupant restraint device arranged in the vehicle to protect the occupant of the vehicle; a seat having the seating area of a seat; a bladder having a chamber, said bladder being arranged in said seat portion; a control module that issues a command or commands to control whether to deploy or suppress the occupant restraint device, and if deployed, how to adjust the manner in which the occupant restraint device is deployed; and a pressure sensor for measuring a pressure in said chamber, said pressure sensor generates a

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<sup>6</sup> The parties have agreed to construe “chamber” throughout these claims as “partially or totally enclosed space.”

signal based upon the measured pressure in the chamber and provides that signal to the control module.

5. The vehicle of claim 4, wherein said occupant restraint device is an airbag.

6. The method of claim 2, further comprising the step of using the control module to issue a command or commands to control at least one other vehicular system, subsystem or component.

7. The method of claim 6, wherein the at least one other system, subsystem or Component is a pressure control device which controls pressure in the chamber.

(‘945 Patent (emphasis in original); see Dkt. # 41 at 54; Dkt. # 92 Ex. 8 at 1-4, 26-27.)

The claims of the ‘945 Patent describe an apparatus, method, or vehicle, where bladder-based pressure sensors in the vehicle seat are used to signal a control device that regulates an occupant restraint device, which in certain claims is limited to an airbag. The prior art, by contrast, teaches the bladder-based sensor and occupant restraint device regulation elements separately.

### *3. Secondary Considerations of Non-obviousness*

Under *Graham*, which was explained but not overruled by *KSR*, the court must look also to any secondary indicia of non-obviousness. See *Geo M. Martin Co. v. Alliance Mach. Sys. Int’l LLC*, 618 F.3d 1294, 1304 (Fed. Cir. 2010). Plaintiff asserts four such secondary considerations: commercial success, resolution of “a long-felt but unresolved need,” the difficulty others had in solving the problem, and the unexpected results attained.

To prove commercial success, the patentee carries the initial burden of showing both commercial success and a nexus between the infringed claims and that success. *J.T. Eaton & Co. v. Atl. Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997); see

*Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1310-11 (Fed. Cir. 2010). “If a patentee makes the requisite showing of nexus between commercial success and the patented invention, the burden shifts to the challenger to prove that the commercial success is instead due to other factors extraneous to the patented invention, such as advertising or superior workmanship.” *J.T. Eaton*, 106 F.3d at 1571; *accord Crocs*, 598 F.3d at 1311 (“Once the patentee demonstrates a prima facie nexus, the burden of coming forward with evidence in rebuttal shifts to the challenger.”). Plaintiff argues that Delphi’s PODS product, the alleged infringing device, had a 70% market share, thereby evincing commercial success. (Dkt. # 123 at 25.) Plaintiff also maintains, with respect to the nexus issue, that Defendants produce no evidence in support of their assertion that a nexus was lacking, while Plaintiff has produced the declaration of Dr. David Breed (“Breed Declaration”), Plaintiff’s chief executive, opining that the commercial success was due to features claimed in the ‘945 Patent. (*Id.*; see Tr. 168:8-173:4.)

As the burden is on the patentee to show commercial success, Plaintiff must advance evidence in support of a nexus before any burden of production shifts to Defendants to rebut the nexus element. Here, Plaintiff’s declaration, by an expert who is also Plaintiff’s executive, contains merely a statement asserting the existence of a nexus between the claims and the success. Such a conclusory statement from an interested party is entitled to little weight. The court, *supra*, quoted once before a statement well worth repeating here in reviewing the Breed Declaration: “Broad conclusory statements offered by . . . experts are not evidence and are not sufficient to establish a genuine issue of material fact.” *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1329 (Fed. Cir. 2001) (citing *Arthur A. Collins, Inc. v. N. Telecom*,

*Ltd.*, 216 F.3d 1042, 1046 (Fed. Cir. 2000)). A broad, conclusory statement advanced by an expert is entitled to even less weight when that expert is also the chief executive of the party offering it for its truth. Accordingly, Plaintiff has not met its burden of showing the commercial success of the PODS product was due to the infringement of Plaintiff's claims, and therefore commercial success is an unpersuasive secondary consideration in the obviousness analysis.

Defendants respond to Plaintiff's next three secondary indicia in bulk, stating that the alleged satisfaction of a long-felt need, the failure of others, and the unexpected results "all fail because they rely on unclaimed features." (Dkt. # 141 at 9-10.) The court agrees. Plaintiff argues that there was a long-felt need, prior to government intervention in the form of requiring OEMs to incorporate occupant detection systems in their vehicles, for airbags that would respond differently to different types of vehicle occupants. (Dkt. # 123 at 26.) But the broad and general claims of the '945 Patent do not describe the detection of "morphological characteristics" of an occupant or the presence of a child seat. Rather, they describe a generalized system of sensing an occupant and adjusting airbag deployment as a result.

Similarly, the claims do not suggest that the '945 Patent solved the problem of detecting when an occupant leaves a seat, again because they are directed only to a generalized system of occupant detection and airbag deployment. (See *id.* at 27-28.) Thus, Defendant Delphi's alleged difficulty in solving the engineering problem of using a bladder to measure occupant departure, and the problems others had in using other types of sensors, is of no moment to the obviousness analysis because those features are not claimed.

Finally, Plaintiff's arguments regarding an "unexpected result" are unpersuasive. Plaintiff seems to contend that the unexpected result is simply the fact of the invention, that is, that bladder-based sensors could be used in this way. (*Id.* at 29-30.) The combination of the bladder with the control module and airbag, rather than using the bladder as a part of another type of system, is simply a result. Plaintiff has not demonstrated why one would not have expected such a system to function.

Plaintiff's secondary considerations, for the reasons stated above, are not probative of obviousness.

Turning to whether the '945 Patent is obvious in view of the prior art beyond any secondary considerations, the court finds that it is. The prior art, at the time of invention, taught both bladder-based sensors used to regulate vehicle components, and airbags regulated by different types of pressure sensors. The combination of a bladder-based sensor with an airbag control system would have been obvious to one of ordinary skill in the art at that time.

As Defendants indicate, Bauer '853 contains the suggestion of combining airbag control systems with different types of pressure sensors. Bauer '853 at 4:2-4 ("Weight may alternatively be sensed using a weight sensor other than that disclosed in the '243 patent."). (See Tr. 44:22-45:12.) Moreover, in accordance with *KSR*, the teaching, suggestion, or motivation to combine existing knowledge need not be referenced explicitly in the prior art. It is enough that it would have been obvious to the person having ordinary skill in the art, which the Supreme Court has instructed is a person having ordinary creativity, to combine the references.

A district court must undertake the challenging task of assuming the knowledge of an automotive engineer with a few years' experience in 1995 to engage in the thought experiment the law requires. While the parties disagree over the teaching, suggestion, or motivation to combine, they do not disagree over the substantive teachings of the prior art cited here. Thus, there is no genuine dispute of material fact regarding these references, and whether they render the '945 Patent obvious is a matter of law. The court is convinced that the mere substitution of one known type of sensor for another in already well-developed airbag systems is as obvious a combination as one might find. It might even have been obvious to a lay person, upon a brief description of the state of the art, to combine different types of sensors with various components to regulate in a vehicle.

*KSR* is instructive in undertaking the analysis here, not just for its description of the law, but also because the facts before the Court in that case are strikingly similar to those before this court in the present matter. The patent at issue in *KSR* claimed an adjustable vehicle pedal with an electronic sensor attached to the pedal to detect the position of the pedal. *KSR*, 550 U.S. at 411. The district court found that a prior art reference, Asano, "taught everything contained in claim 4 except the use of a sensor to detect the pedal's position and transmit it to the computer controlling the throttle." *Id.* at 413. The district court found that the combination of electronic sensors and adjustable pedals was inevitable, as indicated by a reference, Rixon, and that another reference, Smith, taught a solution that would solve a problem presented in Rixon, thus allowing for the combination of Asano with an electronic sensor. *Id.* The Federal Circuit reversed the district court, reasoning that "unless the 'prior art references address[ed]

the precise problem that the patentee was trying to solve,’ the problem would not motivate an inventor to look at those references.” *Id.* at 414 (alteration in original) (quoting *Teleflex, Inc. v. KSR Int’l Co.*, 119 F. App’x 282, 288 (Fed. Cir. 2005)). Thus, the Court of Appeals held, because the prior art did not explicitly reference a teaching, suggestion, or motivation to combine the art, claim 4 was not obvious. *Id.* at 414. At the very least, the Federal Circuit said, Teleflex’s expert’s assertion of nonobviousness was sufficient to create a genuine dispute of material fact. *Id.* at 415.

As is described, *supra*, the Supreme Court in *KSR* “reject[ed] the rigid approach” of the Federal Circuit. *Id.* The Court directed reviewing courts to use “common sense” and enabled them to look beyond “the problem the patentee was trying to solve.” *Id.* at 420. The Court instructed, “in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle,” and observed, “[a] person of ordinary skill is also a person of ordinary creativity.” *Id.* at 420-21. Applying these principles, the Court held the claim obvious. *Id.* at 422.

Just as *KSR* concerned the combination of two previously known automotive vehicle components in a single device, so too does this case present such a combination. Just as the absence of explicit motivations in each prior art reference in *KSR* did not avoid a finding of obviousness, so too does that absence not preclude such a finding here. Just as the Court relied on “common sense” to recognize that different known puzzle pieces are likely to be placed together by one of ordinary skill in the art “to solve a problem [where] there are a finite number of identified, predictable solutions,” so

too is this a case of such puzzle-solving.<sup>7</sup> See *id.* at 420-21. And finally, just as an expert's assertion of nonobviousness was not sufficient to create a genuine dispute of material fact there, so too is it insufficient here.

In short, *KSR* is just about as damaging a case to Plaintiff's attempts to avoid summary judgment on obviousness grounds as there could be. Read narrowly, it states that prior art need not contain the suggestion of combination for it to be obvious to combine vehicle components to create a more sophisticated vehicle system of the same general type that already exists in the prior art. The court holds that the parties' arguments over the '945 Patent fit neatly within this paradigm. Therefore, the '945 Patent is obvious in view of White '160, Fujita '583, Steffens '378, Bauer '853, Lobe '092, Takagi '943, and Tobita '424. Defendants' "Motion for Summary Judgment of Invalidity of the '945 Patent Pursuant to 35 U.S.C. § 103 as Obvious in View of the Prior Art" will be granted.

### **C. '029 Patent**

The central and dispositive issue contested by the parties over the motion directed toward the '029 Patent is the priority date to which the patent can reach. Because the '029 Patent can claim priority only back to December 11, 2003, at the

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<sup>7</sup> The court rejects Plaintiff's argument that a person having ordinary skill in the art would not have looked to Takagi '943 because that art is from the purportedly distinct field of automotive comfort, as opposed to automotive safety. (See Tr. 130:23-132:14.) As Defendants' counsel persuasively argued in rebuttal at the hearing, "[T]he person of ordinary skill in art is an automotive engineer. Plainly, [automotive engineers] are going to have familiarity with bladders in seats where the pressure is used for controlling a headrest or, or controlling seat stiffness or controlling an airbag or anything else." (Tr. 200:24-201:3.) Put simply, Plaintiff slices the field of automotive engineering too thin in suggesting that an automotive engineer might be so specialized in the "field" of restraint devices that he would not think to look to the "field" of comfort for known solutions. (See Tr. 199:14-201:21.)



earliest, U.S. Patent No. 6,442,504 (“Breed ‘504”) is § 102(b) art, because it issued August 27, 2002, and renders the ‘029 Patent invalid as anticipated. The court will grant the motion on the basis of Breed ‘504, and therefore need not reach Defendants’ arguments regarding JP 3-32943 (“Takagi ‘943”) and U.S. Patent No. 5,927,427 (“Sewell ‘427”).

### 1. Priority

Defendants assert that the ‘029 Patent is entitled to a priority date of December 11, 2003, at the earliest, the filing date of the ‘945 Patent, the earliest patent in the family that references all six corresponding structures for the “adjustment system” as construed by the court in the *Markman* order. Plaintiff rejoins that a parent application is not required to disclose all of the corresponding structures to a means-plus-function claim to lend its priority date to the later application as long as the infringing product does not read upon the undisclosed corresponding structures, and thus asserts the priority date of June 7, 1995, the filing date of U.S. Patent No. 5,822,707 (“Breed ‘707”). In the alternative, Plaintiff argues that all six corresponding structures are explicitly or inherently disclosed by the ‘707 and ‘504 specifications. Plaintiff bears the burden of showing its later-filed continuation-in-part application is entitled to the filing date of a parent. *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305-06 (Fed. Cir. 2008).

In the *Markman* order, the court construed the ‘029 claim limitation of “an adjustment system arranged to adjust said at least one component” as a means-plus-function claim, and listed six corresponding structures:

- an orifice between an inner bladder and an outer container;
- seat positioning actuators or motors;

- seat and/or headrest motors;
- adjustable airbag inflators, control valves, exit valves, and/or exit orifices;
- seatbelt pretensioner or force limiter;
- inflation combustion chamber and a pressure control system associated with an airbag.

(Dkt. # 41 at 24-27.) The parties here agree that the first five listed corresponding structures are described within the '707 and '504 specifications, and that the sixth is not explicitly contained therein. They disagree as to whether the sixth need be described in order for Plaintiff to gain the benefit of that application's filing date, and if so, whether the sixth is implicitly described in the '707 and '504 specifications.

The '029 Patent is, like the other patents-in-suit here, part of a large family. Only the most relevant family members are recited here. It is a continuation of the '945 Patent, and a continuation-in-part of Breed '504 and Breed '707. Breed '707 was filed on June 7, 1995, and issued October 13, 1998. Breed '504 was filed on February 8, 2000, and issued August 27, 2002. Finally, the '945 Patent was filed December 11, 2003, and issued July 17, 2007. If the '029 Patent can claim the filing date of Breed '707, or alternatively Breed '504, as its priority date as Plaintiff asserts, then Breed '504 would not be prior art. However, if Defendants are correct that the '029 Patent can only claim the priority date of the '945 Patent, then Breed '504 is invalidating prior art.<sup>8</sup>

A patent's specification must contain a written description sufficient to enable a person of skill in the art "to make and use" the claimed invention. 35 U.S.C. § 112. The written description<sup>9</sup> and enablement requirements, if unsatisfied, will render a claim

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<sup>8</sup> Of course, Breed '504 can only be invalidating prior art provided it discloses every element of each of the representative claims, which the parties do not dispute.

<sup>9</sup> The written description requirement is related to, but distinct from, the written description of the patent.

invalid. See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 736 (2002) (“[T]he patent application must describe, enable, and set forth the best mode of carrying out the invention. . . . The patent also should not issue if the other requirements of § 112 are not satisfied, and an applicant’s failure to meet these requirements could lead to the issued patent being held invalid in later litigation.” (citation omitted)).

A corollary of the rule is that a patent may generally only claim a priority date of the date the patent’s specification was filed. Thus, a patent containing enabled and adequately described claims that issues from a continuation application may claim the benefit of the priority date of its parent application because they share identical specifications; a continuation application may not contain new matter. See 35 U.S.C. § 120; M.P.E.P. § 201.07. However, a patent that issues from a continuation-in-part application—which does not contain a specification identical to that of the parent, M.P.E.P. § 201.08—may only claim the parent application’s priority date if the parent’s specification satisfies the requirements of § 112 ¶ 1 with respect to the challenged claims. See 35 U.S.C. § 120; M.P.E.P. § 201.11(I)(B) (“Only the claims of the continuation-in-part application that are disclosed in the manner provided by the first paragraph of 35 U.S.C. [§ 112] in the prior-filed application are entitled to the benefit of the filing date of the prior-filed application.”); see also *Kennecott Corp. v. Kyocera Int’l, Inc.*, 835 F.2d 1419, 1421 (Fed. Cir. 1987) (“The incorporation of the requirements of section 112 into section 120 ensures that the inventor had possession of the later-claimed invention on the filing date of the earlier application. The written description must communicate that which is needed to enable the skilled artisan to

make and use the claimed invention. A description that does not meet this requirement is legally insufficient.” (citation omitted)). The strict enforcement of the § 112 ¶ 1 requirements guarantees that a patent applicant utilizing a continuation-in-part application cannot reach an earlier priority date for an invention that is first disclosed by new matter contained within the application. The relevant priority date is determined on a claim-by-claim basis. *Lucent Techs., Inc. v. Gateway, Inc.*, 543 F.3d 710, 718 (Fed. Cir. 2008).

Means-plus-function claims must “be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112 ¶ 6. The corresponding structures described within the specification are necessary to satisfy the definiteness requirement of § 112 ¶ 2. *See Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1376 (Fed. Cir. 2010) (“For a means-plus[-]function claim to satisfy the definiteness requirement, the written description must clearly link or associate structure to the claimed function.”); *In re Dossett*, 115 F.3d 942, 946 (Fed. Cir. 1997); *In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc). Even if the definiteness requirement is satisfied by the existence of some corresponding structure or structures, the written description of those structures, both as it applies to the written description requirement and the enablement requirement, defines the scope of the means-plus-function claim.

This statement of law, however, is not immediately clear from a review of Federal Circuit case law, and is deserving of a brief detour to justify the court’s reliance on both the enablement and written description requirements in resolving this legal question.

The Federal Circuit has clearly stated that “priority policing” does require a court to evaluate the written description requirement.

To satisfy the written description requirement, the disclosure of the earlier filed application must describe the later claimed invention in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought. While the earlier application need not describe the claimed subject matter in precisely the same terms as found in the claims at issue, the prior application must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of *the invention* . . . . Compliance with the written description requirement is a question of fact . . . .

*Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1331-32 (Fed. Cir. 2008)

(emphasis and alteration in original) (internal quotation marks and citations omitted). Of course, to satisfy § 120, an earlier-filed specification must meet all of the requirements of § 112 ¶ 1—written description, enablement, and best mode—in support of the later-filed claims.

Relatedly, in the context of means-plus-function claims, the Federal Circuit has invoked the written description and definiteness requirements while eschewing the enablement requirement.

The question is not whether one of skill in the art would be capable of implementing a structure to perform the function, but whether that person would understand the written description itself to disclose such a structure. While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function.

*Telcordia*, 612 F.3d at 1376 (internal quotation marks and citations omitted); *accord*

*Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1336-37 (Fed.

Cir. 2008). *Donaldson* and *Dossett* make clear that the definiteness requirement is

satisfied provided there is at least one corresponding structure. Although *Telcordia* and

*Aristocrat* might be read to state that support for a means-plus-function claim is not a question of enablement, the court finds that the enablement and written description problems are both implicated in discerning whether the parent's specification provides support for the child's means-plus-function claim. That is, whether the scope of the claims of a continuation-in-part is adequately supported by a parent's specification *is* a question of enablement, as well as one of written description, as additional corresponding structures have the capacity to alter the claimed invention, and thus must be disclosed in order to enable one of ordinary skill in the art to make and use the invention claimed in the continuation-in-part. See, e.g., *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008); *Auto. Techs. Int'l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1285 (Fed. Cir. 2007) ("[I]n order to fulfill the enablement requirement, the specification must enable the full scope of the claims . . . ."); *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1375 (Fed. Cir. 2005); see also *Anascape, Ltd. v. Nintendo of Am., Inc.*, 601 F.3d 1333, 1342 (Fed. Cir. 2010) (Gajarsa, J., concurring) (discussing preference for use of written description requirement as a "priority policing" mechanism while leaving enablement requirement as the "preferred vehicle for invalidating claims.").

Therefore, for means-plus-function claims of a continuation-in-part to claim the priority date of its parent, the claims will satisfy the written description and enablement requirements of § 112 only if the construed corresponding structures are present in the parent's specification. The primary issue here is whether each and every corresponding structure must be present in the parent's application; if the answer to that question is "yes," the secondary question is whether there is a genuine dispute of material fact over

whether the '707 or '504 specifications implicitly disclose the sixth corresponding structure.

The parties disagree over the interpretation of several Federal Circuit cases that address the issue of whether a later-filed means-plus-function claim is enabled and adequately described if not all of the corresponding structures are disclosed in the earlier-filed specification. A review of four of these cases and the parties' arguments suffices to lead the court to the conclusion that a parent application must disclose all of the corresponding structures of a claim from a continuation-in-part application in order for the patent that issues from that application to trace its priority date back to the parent.

In *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419 (Fed. Cir. 1997), the court construed a means-plus-function claim to cover the single corresponding structure of a "traverse cross bar." 124 F.3d at 1425. The court affirmed the jury verdict on the issue of noninfringement, finding that the accused device did not contain the cross bar. *Id.*

In *Lucent*, claim 4 was the only means-plus-function claim at issue. Lucent asserted the claim was entitled to a 1988 priority date, which would allow the claim to avoid prior art, though the district court had found the claim could only reach back to a 1992 priority date. 543 F.3d at 718-19. The court rejected Lucent's argument that the claimed invention was entitled to more than two corresponding structures, the DSP and VLSI. *Id.* Because neither of these two corresponding structures was found in the putative parent's specification, the court held that claim 4 could only have the 1992 priority date. *Id.* at 719.

Defendants argue that *Lucent* and *Braun* should be read to state that each and every corresponding structure linked to a means-plus-function claim must be present to satisfy the enablement and written description requirements of § 112 in order to allow a continuation-in-part to reach an earlier priority date. Plaintiff counters that the cases only state that where none of the corresponding structures are present, § 112 will not be satisfied.

A third case, *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361 (Fed. Cir. 2005), concerned animal castration tool patents. A jury found the patents-in-suit invalid and not infringed. 427 F.3d at 1363. The district court denied a motion for judgment as a matter of law, *id.*, finding that the patents-in-suit could not claim the benefit of a parent's priority date, even though the parent described the construed "winding" mechanism corresponding to a means-plus-function limitation, because it only described the "caulking gun" mechanism means in a "disparaging" manner in the background section of the specification, and therefore did not satisfy the enablement requirement. *Id.* at 1364-66. The Federal Circuit reversed the denial of the motion for judgment as a matter of law, finding the infringed patents were entitled to the earlier priority date, because both mechanisms were enabled by the parent's specification, regardless of the location or disparaging nature of the remarks. *Id.* at 1373-75.

The final case discusses analogous § 112 issues outside of the context of means-plus-function claims. In *Anascape, Ltd. v. Nintendo of Am., Inc.*, 601 F.3d 1333 (Fed. Cir. 2010), *cert. denied*, 2010 WL 3417304 (Nov. 1, 2010), the Federal Circuit reviewed a jury's judgment of infringement awarded to Anascape against Nintendo in a jury trial over patents on certain "hand-operated controllers." 601 F.3d at 1334.



Anascape's infringed patent was a continuation-in-part of a prior application that also resulted in an issued patent, and Anascape's claim of infringement hinged on whether the infringed patent could trace its priority back to its parent application. *Id.* The Federal Circuit reversed the judgment, finding that the parent application disclosed only a "single input" controller, and not a "multiple input" controller as was claimed in the infringed patent. *Id.* at 1340-41. Therefore, the allegedly infringed patent could not claim priority to the parent application because the parent's specification failed to satisfy the written description requirement. *Id.*

*Anascape* does not directly address the question before the court. It treats whether the absence of a particular embodiment bars the use of an earlier priority date because the written description or enablement requirements are not satisfied, rather than whether the absence of a particular corresponding structure bars the use of an earlier date where means-plus-function claims are at issue. But it is instructive nonetheless by analogy: corresponding structures may be found in embodiments listed within the specification. *See Lucent*, 543 F.3d at 719 (referring to corresponding structures in patent specification as embodiments). *Callicrate* stands for the proposition that the earlier date may be reached where all corresponding structures are present in the parent, a proposition to which all parties agree. *Anascape* stands for the inverse: the earlier date may not be reached where even one embodiment is missing. Taken together, these cases support the rule that each and every embodiment or corresponding structure of a claimed invention must be present in a parent's specification in order for the patent that issued from the continuation-in-part to satisfy the enablement and written description requirements of § 112.

Plaintiff takes a narrower view of these latter two cases. Plaintiff concedes that where means-plus-function claims are at issue, the parent's date may not be used if no corresponding structure is present in the specification, but urges the court to adopt a rule allowing the absence of a corresponding structure to be ignored if the allegedly infringing invention does not read upon that corresponding structure. Plaintiff attempts to distinguish *Anascope* in that the specification at issue there contained only two embodiments, rather than the six corresponding structures at issue here.

The court agrees with Defendants that such a rule could lead to absurd results, where the priority date of a claim would depend on the invention challenging the validity of the patent. Under that rule, where the invention reads upon the missing corresponding structure, the prior art would be limited to a later priority date, and where the invention only reads upon structures present in the parent, the infringed claims would have an earlier date. This notion of conditional dates of invention would shake the bedrock principles of patent law, which require a determinate date of invention so that an exclusive right to make and use an invention may be awarded to whomever invented it first. See Chisum on Patents § OV[4] (2010) ("The United States patent system stands alone in the world in determining priority among competing inventors by reference to who was the 'first to invent'."). It would be nonsensical for a claim to have two different priority dates where two different companies bring two suits based on two different accused devices, only one of which devices lacks one or more of the corresponding structures or embodiments.<sup>10</sup>

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<sup>10</sup> Plaintiff, for its part, argues that another "absurd result" would come from adopting the rule urged by Defendants. (Dkt. # 122 at 17-18.)

The court therefore holds that each and every structure corresponding to a means-plus-function claim found in a continuation-in-part application, as construed in a *Markman* order, must be recited in a parent application for the claim to gain the benefit of the parent's priority date.

Moreover, the court finds no genuine dispute that the sixth corresponding structure is absent from Breed '707 and Breed '504, and rejects Plaintiff's contention that it is "implicitly" or "inherently" disclosed. While Plaintiff admits the structure of an "inflation combustion chamber and a pressure control system associated with an airbag" is not expressly disclosed in Breed '707 or Breed '504, it advances two arguments for why it is implicitly or inherently disclosed: first, that one of ordinary skill in the art would recognize that the specification discloses such a structure, and second, that the elements of "(1) 'inflators where the amount of gas generated and the rate of generation is controllable;' (2) pressure control; and (3) 'pyrotechnic charges' . . . implicitly

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Under Defendants' articulation of the law, priority for an admittedly supported claim would be wiped out if the patentee added disclosure—as it is permitted (and encouraged) to do in subsequent filings. . . . It would be inequitable to punish a patentee . . . for . . . disclosing an *additional* "corresponding structure" that performs a stated function which is *wholly* unrelated to its charges of infringement.

(*Id.* at 17 (emphasis in original).) But there is nothing absurd about this result at all. Patent law "encourages" (i.e., requires) the full disclosure of an invention claimed by a patent application. The written description must be sufficient to enable one of ordinary skill in the art to make and use the claimed invention. In return for this complete disclosure, the United States issues a patent giving an exclusive right to the inventor for a limited period of time. When that inventor in a subsequent application includes new matter for a subsequent invention, it is and should be presumed that the new matter was not part of the first claimed invention, or else the written description of the first invention should have disclosed the new matter. Thus, the inventor is "encouraged" to make a full disclosure of the invention the first time around, and not in some later application.

describe[]” and enable the sixth structure. (Dkt. # 122 at 12-14 (emphasis removed) (quoting Dkt. # 125 ¶ 39).) In support of the first proposition, Plaintiff relies on the Breed Deposition and the Watson Declaration, and in support of the second, Plaintiff rests only on the Watson Declaration.

The cited portion of the Breed Deposition draws into question the satisfaction of the § 112 requirements, but it does not support, as Plaintiff asserts, any conclusion of what one of ordinary skill in the art would recognize based on the Breed ‘707 and Breed ‘504 specifications’ disclosures. When asked, “[W]ould an ordinarily skilled engineer reading that the rate of generation of gas is controllable recognize and be able to implement a system whereby the rate . . . of generation of gas was controlled by having a pressure monitoring system controlling the pressure of the inflater combustion chamber?” Breed responded that he was “not sure of what engineer” was referenced but said that an engineer “who is concentrating on designing inflaters at some point in this time frame I think understands that concept.” (*Id.* at 12-13 (quoting Breed Deposition at 208:20-212:19).) This equivocal representation from an interested party is insufficient to create a genuine dispute of material fact regarding the disclosure of the sixth structure.

Plaintiff’s use of the Watson Declaration is similarly unavailing. As discussed above, a party may not create a genuine dispute of material fact simply by having an expert assert a conclusory, unsupported opinion. The Watson Declaration does just that: in three successive paragraphs, Dr. Watson formulaically recites, without any support, that one of ordinary skill in the art would realize the sixth structure is present, and that the three elements describe and enable the sixth structure in both Breed ‘707

and Breed '504.<sup>11</sup> (Dkt. # 125 ¶¶ 39-41.) The court finds the Watson Declaration, in and of itself, insufficient to create a genuine dispute of material fact.

## *2. Anticipation*

Because Breed '707 and Breed '504 do not disclose the sixth corresponding structure, the claims of the '029 Patent are entitled to, at the earliest, the priority date of the '945 Patent, or December 11, 2003. Breed '504 is therefore prior art to the '029 Patent. Indeed, Breed '504 is anticipatory prior art, as it discloses all of the limitations of the '029 Patent's representative claims. Plaintiff does not contest Defendants' assertion that Breed '504 contains all of these disclosures. In sum, there is no genuine dispute of material fact regarding Defendants' clear and convincing showing that the '029 Patent is invalid as anticipated. Therefore, the court will grant Defendants' "Motion for Summary Judgment of Invalidity of the '029 Patent."

## **D. '080 Patent**

The claims of the '080 Patent are also invalid as anticipated. As a result of this finding, the court has no occasion to consider Defendants' motion for summary judgment on the basis of collateral estoppel.

The '080 Patent was filed on January 2, 2001, and issued November 19, 2002. The parties do not dispute, for the purposes of the motion for summary judgment of invalidity by reason of anticipation under § 102, the priority dates of the representative claims of the '080 Patent. Thus, the court will assume claims 19, 28, 33, and 48 are entitled to a priority date of June 7, 1995, the filing date of U.S. App. No. 08/476,707,

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<sup>11</sup> Such opinions are particularly suspect where, as here, the expert's declaration is filed at a late hour, with a party's responses to dispositive motions.

which later issued as U.S. Patent No. 5,809,437 (“437 Patent”), and of which the ‘080 Patent is a grandchild via two continuation-in-part applications. The parties also agree, for the purposes of this motion only, that claims 24, 26, and 27 are entitled to a priority date of January 2, 2001. As construed by the court and the parties, the representative claims provide:

19. A method for controlling at least one part of the vehicle comprising the steps of attaching at least two sensor systems<sup>12</sup> at different locations on the vehicle; measuring a state<sup>13</sup> of the sensor system or a state of the respective mounting location of the sensor system; diagnosing the state of the vehicle<sup>14</sup> based on the measurements of the state of the sensor systems or the state of the mounting locations of the sensor systems, and controlling the at least one part based at least in part on the diagnosed state of the vehicle.<sup>15</sup>

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<sup>12</sup> The parties have agreed to construe the pre-*Markman* order phrase “plurality of sensor systems” as “more than one sensor system. ‘Sensor system’ means one or more components or assembly of components which detect, sense or measure something.”

<sup>13</sup> The parties have agreed to construe “state” as “condition.”

<sup>14</sup> The phrase “diagnosing the state of the vehicle” as used in Claims 19 and 33 has been construed by the court as “diagnose the stability and proper running and operating condition of the vehicle as a whole. The diagnosis includes normal driving operating, as well as abnormal operation including excessive angular inclination (such as two wheels being off the ground as the vehicle is about to roll over), a crash, skidding and other similar situations. The diagnosis could also include an indication that one of the parts, components, systems or subsystems of the vehicle is operating abnormally. The diagnosis of the state of the vehicle is not a diagnosis of only one component of the vehicle.”

<sup>15</sup> The phrase “controlling the at least one part based at least in part on the diagnosed state of the vehicle” as used in claims 19 and 33 has been construed by the court as “adjusting or regulating the one or more parts based at least in part on the diagnosis of the stability and proper running operating condition of the vehicle as a whole. The diagnosis includes normal driving operating, as well as abnormal operation including excessive angular inclination (such as two wheels being off the ground as the vehicle is about to roll over), a crash, skidding, and other similar situations. The diagnosis could also include an indication that one of the parts, components, systems or subsystems of the vehicle is operating abnormally. The diagnosis of the state of the vehicle is not a diagnosis of only one component of the vehicle.”

24. The method of claim **19**, wherein the at least one part is an occupant restraint device, the step of controlling the at least one part comprising the steps of issuing a command or commands to control a sensor system in an attempt to minimize injury to an occupant in the event of a crash.

26. The method of claim **25**,<sup>16</sup> wherein the at least one part is an occupant restraint device, further comprising the step of predicting the severity of an impact to a vehicle by taking into account the force and the crush properties of the vehicle at the location of impact, the step of controlling the at least one part comprising the step of issuing a command or commands that control an occupant restraint device in a manner that is determined at least in part by the predicted severity of the impact.

27. The method of claim **19**, wherein the at least one part is an occupant restraint device, further comprising the step of sensing or measuring the weight of an item occupying the seat of the vehicle, the step of controlling the at least one part comprising the step of issuing a command or commands that control a vehicle occupant restraint device in a manner that is determined at least in part by the weight of the occupying item of the seat.

28. The method of claim **19**, further comprising the step of displaying an indication of the state of the vehicle.

33. In a motor vehicle, a control system for controlling at least one part of the vehicle comprising: a plurality of sensor systems mounted on the vehicle, each of said sensor systems providing a measurement of a state of said sensor system or a state of the mounting location of said sensor system and generating a signal representative of the measurement; and a pattern recognition system<sup>17</sup> for receiving the signals from said sensor systems and diagnosing the state of the vehicle based on the measurements of said sensor systems, said pattern recognition system

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<sup>16</sup> Claim 25 states: "The method of claim **19**, wherein the step of diagnosing the state of the vehicle comprises the step of determining a location of an impact between the vehicle and another object." The parties have agreed to construe "determining a location of an impact between the vehicle and another object" as "determining the part of or location on the vehicle which is being impacted by another object."

<sup>17</sup> The phrase "pattern recognition system" as used throughout this claim has been construed by the court as "a system that receives and compares signals from vehicle sensors to patterns characteristic of normal or abnormal behavior through pattern recognition technology or technologies, such as, for example, neural networks, sensor fusion, or fuzzy logic, in order to diagnose the state of the vehicle."

being arranged to generate a control signal for controlling the at least one part based at least in part on the diagnosed state of the vehicle.

48. A method for controlling at least one part of the vehicle, comprising the steps of: mounting a plurality of sensor systems on the vehicle; measuring a state of the sensor system or a state of the respective mounting location of the sensor system; generating signals representative of the measurements of the sensor systems; inputting the signals into a pattern recognition system to obtain a diagnosis of the state of the vehicle; and controlling the at least one part based at least in part on the diagnosis of the state of the vehicle.

(‘080 Patent (emphasis in original); see Dkt. # 41 at 60-63; Dkt. # 92 Ex. 8 at 15-21, 31-33.)

Each and every limitation of every claim is anticipated by at least one prior art reference. Because of the volume of art cited by Defendants, the court discusses only two of the references that together render all seven representative claims invalid, and need not reach the other references presented.

### *1. Claim 19*

Claim 19 is anticipated by U.S. Patent No. 5,408,411 (“Nakamura ‘411”). Defendants assert Nakamura ‘411 discloses every limitation of claim 19. Nakamura ‘411 has a priority date of January 17, 1992, and issued April 18, 1995. Therefore, it is § 102(a) and (e) art to the ‘080 Patent. Plaintiff disputes Defendants’ assertion of Nakamura ‘411 only with respect to one limitation of claim 19: “diagnose the stability and proper running and operating condition of the vehicle as a whole.” Plaintiff provides little analysis as to why it believes Nakamura ‘411 does not disclose this limitation, but cites to the Watson Declaration.<sup>18</sup>

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<sup>18</sup> The Watson Declaration also asserts that Nakamura ‘411 is not enabled. (Dkt. # 125 ¶ 48.) However, because Plaintiff does not raise the enablement argument in its response, (see Dkt. # 119 at 13-14), the court does not address it.



Nakamura '411 teaches

a system for detecting a physical amount associated with the behavior or motion of an automotive vehicle, and a system for controlling vehicular behavior or motion on the basis of the detected physical amount associated with the vehicular behavior. More particularly, the invention relates to a system for detecting physical data, such as acceleration, speed, angular acceleration, force, torque and so forth at a selected point on the vehicle, and for controlling the physical amounts in order to realize a desired vehicular behavior or motion.

Nakamura '411 at 1:8-18. The system disclosed in Nakamura utilizes "acceleration sensors arranged on at least two longitudinal axes of the vehicle, the vertical axis [o]f the vehicle and the lateral axis of the vehicle, a plurality of the acceleration sensors being disposed on each of the axes." *Id.* at Abstract. These acceleration sensors are used to measure the acceleration, velocity, and torque along and around the x-, y-, and z-axes of a coordinate system where the origin is at the center of gravity of the vehicle. *Id.* at Figure 1, 1:21-40. In other words, the sensors are used to determine the motion associated with the six degrees of freedom of the vehicle.

These motions are closely associated with vehicular driving characteristics. For example, yawing or rolling are important factors for determining vehicular driving stability. On the other hand, pitching and the vertical motion are caused by undulation of the road surface and/or acceleration and deceleration of the vehicle and are motions which affect the riding comfort of the vehicle.

*Id.* at 1:41-48. The specification of Nakamura '411 is replete with similar references to the diagnosis of vehicle behavior based on the sensor system disclosed therein.

The court can imagine few ways to "diagnose the stability and proper running and operating condition of the vehicle as a whole" that are better than determining the motion of the vehicle in each of its six degrees of freedom and associating common patterns with vehicle behavior, as is disclosed in Nakamura '411. Nakamura '411

describes systems for diagnosing both normal and abnormal driving conditions, such as “lateral slip or spinning.” *Id.* at 1:41-48, 2:54-63. Because Plaintiff provides only the conclusory statement of its expert declarant that this reference lacks such a disclosure, the court cannot discern why Plaintiff believes this reference does not anticipate. Nakamura ‘411 indisputedly discloses diagnosing the state of the vehicle as a whole, and accordingly anticipates claim 19.

## 2. Claim 24

U.S. Patent No. 5,785,347 (“Adolph ‘347”) anticipates claim 24 because it contains each and every limitation of the claim. Adolph ‘347 issued July 28, 1998, and is therefore prior art to claims 24, 26, and 27 pursuant to § 102(b). Adolph ‘347 teaches “[a]n occupant sensing and crash behavior system” that includes “[c]rash anticipation and crash severity sensors . . . to determine the behavior of the crash and the occupants therein.” Adolph ‘347 at Abstract. Plaintiff disputes Defendants’ assertion that Adolph ‘347 discloses the element of “diagnosing the stability and proper running and operating condition of the vehicle as a whole.”

But Adolph ‘347 clearly teaches that element. As Defendants observe, Adolph ‘347 describes a system of sensors to “determine the presence of a crash condition.” Adolph ‘347 at 3:8-18. Because the system can recognize the existence of a crash condition, the absence of such a recognition is indicative of “normal driving operating.” Moreover, the art discloses the use of both frontal and side impact sensors, *id.* at 3:8-22, to diagnose “crash behavior,” or “the characteristic of the impact or the impending impact of the vehicle,” *id.* at 5:22-26. In addition, “[a]nother behavioral signal is generated from a crash severity sensor **48** which . . . by means of the algorithm in the

ECU **28** is able to determine the severity of the impact or crash and to affect deployment of the restraint means **14** accordingly.” *Id.* at 5:42-46 (emphasis in original). The implementation of these various sensors to determine the location and severity of a crash condition and to determine the vehicle behavior is sufficient to diagnose the state of the vehicle as a whole as that phrase has been construed by the court.

Plaintiff does not dispute that Adolph ‘347 discloses all of the other limitations of claim 24. Therefore, there is no genuine dispute that Adolph ‘347 teaches every limitation of the claim and renders it invalid.

### 3. Claim 26

Plaintiff next disputes Defendants’ assertion that Adolph ‘347 anticipates claim 26. A single limitation, “further comprising the step of predicting the severity of an impact to a vehicle by taking into account the force and the crush properties of the vehicle at the location of impact,” is at issue, though Plaintiff further delineates the limitation into sub-elements of severity and location.

As noted above in the discussion of Adolph ‘347’s anticipation of claim 24, the art teaches sensing a crash in the front and also in the side of a vehicle—in other words, it teaches determining the location of impact—along with using a “severity sensor” to determine the severity of impact. While Adolph ‘347 does not use the words “force” or “crush” to describe the method of operation of the sensors, it states that the sensor “responds to the actual impact or crash,” *id.* at 5:43-44, which necessitates some determination of the force of the crash in order to evaluate severity. Therefore, claim 26 is also invalid as anticipated by Adolph ‘347.

### 4. Claim 27

The parties rely on their arguments considered under claim 24, namely the diagnosis of the state of the vehicle as a whole, in litigating claim 27, which depends on claim 24. For the reasons stated above, claim 27 is also anticipated by Adolph '347.

*5. Claim 28*

Plaintiff asserts Nakamura '411 fails to disclose each and every limitation of claim 28, because it does not teach diagnosing the state of the vehicle as a whole, the same reasoning Plaintiff advanced under claim 19. Accordingly, for the reasons set forth above, this argument is unpersuasive.

*6. Claim 33*

Plaintiff also advances the argument that Nakamura '411 does not disclose the "pattern recognition system" element contained in claim 33. However, Defendants point to numerous places within Nakamura '411 that disclose the prediction and diagnosis of vehicle behavior from the data gathered by the sensors and processed by a microcomputer. (Dkt. # 96 at 35.) See, e.g., Nakamura '411 at 3:5-8, 3:18-4:30, 8:20-15:18. Once again, Plaintiff cannot create a genuine dispute of material fact merely by making a conclusory statement and pointing to its expert's declaration. Accordingly, claim 33, too, is anticipated by Nakamura '411.

*7. Claim 48*

The parties rest on the arguments raised under claim 33 with regard to the invalidity of claim 48. Therefore, for the reasons stated above, claim 48 is also anticipated by Nakamura '411.

There is no genuine dispute as to any material fact, and no reasonable jury could find that Defendants have not met their burden of showing, by clear and convincing

evidence, that they are entitled to judgment as a matter of law that the '080 Patent is invalid as anticipated. Defendants' "Motion for Summary Judgment that All the Representative Claims of the '080 Patent are Invalid as Anticipated" will be granted.

#### **IV. CONCLUSION**

All four patents-in-suit are invalid as either anticipated by or obvious over the prior art. Accordingly,

IT IS ORDERED that Defendants' "Motion for Summary Judgment of Invalidity of the '516 Patent" [Dkt. # 91], "Motion for Summary Judgment that All the Representative Claims of the '080 Patent are Invalid as Anticipated" [Dkt. # 95], "Motion for Summary Judgment of Invalidity of the '029 Patent" [Dkt. # 97], and "Motion for Summary Judgment of Invalidity of the '945 Patent Pursuant to 35 U.S.C. § 103 as Obvious in View of the Prior Art" [Dkt. # 105] are GRANTED.

IT IS FURTHER ORDERED that Defendants' "Motion for Summary Judgment of Invalidity of Claims 19 and 24 of the '080 Patent by Reason of Collateral Estoppel" [Dkt. # 93] and "Motion for Summary Judgment of Invalidity of the '945 Patent Pursuant to 35 U.S.C. § 102 as Anticipated by the Prior Art" [Dkt. # 101] are TERMINATED AS MOOT.

s/Robert H. Cleland  
ROBERT H. CLELAND  
UNITED STATES DISTRICT JUDGE

Dated: March 9, 2011

I hereby certify that a copy of the foregoing document was mailed to counsel of record on this date, March 9, 2011, by electronic and/or ordinary mail.

s/Lisa Wagner  
Case Manager and Deputy Clerk  
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